For this, you and your lab buddy need to think about what you experienced today, remember what was said, rely on the Kinetic Theory, and think about how your experiences relate to our standards.

* SPS7b states: “Investigate molecular motion as it relates to thermal energy changes in terms of conduction, convection, and radiation.”
* SPS5a states: “Compare and contrast the atomic/molecular motion of solids, liquids, gases, and plasmas.”

You may use any notes you want, but you must answer the following questions:

1) When the dry ice sublimated (went from a solid straight to a gas), what happened to the motion of its particles?

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2) What type of energy transformation happened in order to allow the dry ice to sublimate?

\_\_\_\_\_\_\_\_\_ energy 🡪 \_\_\_\_\_\_\_\_\_\_\_ energy

3) Which phases of matter are able to FLOW (i.e. are FLUIDS)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) When dry ice sublimated in the mixture of soap and water, why did this phase change cause the bubbles to “blow up on their own”?

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5) Why did the dry ice cause the sealed water bottle to expand?

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6) Why did the bottle eventually explode? Explain this in terms of temperature, pressure, and volume.

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7) What were the energy transformations that happened from beginning to end of the bottle explosion?

\_\_\_\_\_\_\_\_\_\_\_\_\_ energy 🡪 \_\_\_\_\_\_\_\_\_\_\_\_ energy 🡪 \_\_\_\_\_\_\_\_\_\_ energy & \_\_\_\_\_\_\_\_\_\_ energy

8) When the dry ice was placed on the table, why was sound generated if the dry ice was a solid?

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9) Dry ice is NOT HOT! So, why do people say that handling dry ice with your bare hands can cause it to burn you? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10) Perform a 3-2-1 about this lab activity on the back of this lab report and then turn it in!